

Contents

1. Introduction (Lenka Bartošová, Zdeněk Bauer, Jana Bauerová, Miroslav Trnka)	6
1.1 <i>The importance of phenological observations.....</i>	6
1.2 <i>Determination of phenological localities</i>	6
1.3 Geomorphological description	17
1.4 <i>Geobotanical description</i>	19
1.5 <i>Phenological changes in flood-plain forests</i>	20
1.5.1 <i>Short-term phenological observations</i>	21
1.5.2 <i>Long-term phenological observations.....</i>	22
1.6 <i>Phenology as a component of actual science.....</i>	22
2. Climate characteristics (Zdeněk Žalud, Petr Štěpánek, Martin Dubrovský, Eva Nyklová).....	25
2.1 <i>Temperature conditions.....</i>	26
2.2 <i>Precipitation conditions</i>	28
2.3 <i>Trends in temperature and precipitation.....</i>	32
3. Periodic flooding in flood-plain forest ecosystems (Lenka Bartošová, Zdeněk Bauer, Jana Bauerová)	34
4. Methods (Zdeněk Bauer, Jana Bauerová, Lenka Bartošová)	38
4.1 <i>Methodology for observations of herb species</i>	41
4.2 <i>Methodology of the observations of shrub species</i>	43
4.3 <i>Methodology of the observations of tree species</i>	43
4.4 <i>Methodology of the observations of bird species.....</i>	49
5. Results (Zdeněk Bauer, Jana Bauerová, Lenka Bartošová).....	51
5.1 <i>Herbs</i>	51
5.2 <i>Shrub</i>	69
5.3 <i>Trees</i>	72
5.3.1 <i>Phenological changes of trees based on meteorological parameters</i>	72
5.3.2 <i>Phenological changes of trees based on varied altitude</i>	72
5.4 <i>Bird populations</i>	85

5.5 Climate and phenology (<i>Lenka Bartošová, Miroslav Trnka, Martin Možný, Eva Nyklová, Zdeněk Žalud</i>).....	90
5.6 The homogeneity or heterogeneity of the phenological phases (<i>Miroslav Trnka, Lenka Bartošová, Petr Štěpánek, Martin Dubrovský</i>).....	95
6. Phenological response of the flood-plain forest ecosystem to changing climate (<i>Lenka Bartošová, Miroslav Trnka, Martin Možný, Zdeněk Žalud</i>).....	101
7. Conclusions	109
8. Extended Czech summary	111
9. References	121